Springer - Soft Computing Journal

Special Issue on **Fuzzy Ontologies and Fuzzy Markup Language Applications**

Fuzzy control theory is the most widely used application of fuzzy logic providing an adequate methodology for designing and developing controllers capable of supplying high quality performance in environments characterized by high level of uncertainty and imprecision. However, in spite of these unquestionable advantages, the development time of a fuzzy system may be very expensive if the designers need to implement the same controller on a collection of heterogeneous hardwares or if they want to exploit the possibility to collect different controllers in terms of an active and cooperative virtual organization. The *Fuzzy Markup Language* (*FML*), an XML-based markup language skilled for defining a detailed structure of fuzzy controllers that is independent from its hardware representation and, as consequence, enables the device independence and transparency during the control design activities. The Fuzzy Markup Language is becoming as a reference point inside the computational intelligence and industrial communities by acting as: 1) a standard and common representation tool for implementing fuzzy controllers on hardware from different manufacturers and 2) as a framework for performing an efficient distribution of pieces of the global control flow over the different computers by exploiting distributed computing approaches as, for instance, the Multi-Agent systems. FML standardization is currently under completion within the realm of the *Task Force of New Standard Proposals* (*2010*). This task force acts inside the *IEEE CIS Standards Committee* that supports the important mission of proliferating computational intelligence technologies in a wide range of research, education, and application areas by facilitating critical standard interaction between various general purpose intelligent technologies and specific application areas.

Topics of interest (not limited to)

- Ontology and Ontological Agents
- FML Agents for Software Engineering
- FML Agents for Knowledge Discovery
- FML Agents in a Neuro Fuzzy Approach
- FML Agents for E-Commerce
- FML Agents for Smart Environments
- FML Agents for Ambient Intelligence
- Knowledge Sharing with FML Agents
- Distributed Mining with FML Agents
- Semantic Interoperability and Web Services Applications based on FML
- FML in Evolvable Hardware
- Healthcare Ontological Agents
- Agents for Knowledge Management
- Embedded Agents
- FML Agents for Intelligent Manufacturing Systems
- Intelligent Ontological Agent Applications
- Knowledge Representation with Ontology
- Fuzzy Ontologies and Applications
- Knowledge-Based Systems

Schedule

- Manuscript submission: 31 December 2010
- Acceptance/Revision notification: 28 February 2011
- Revised manuscript due: 1 May 2011
- Final acceptance notification: 1 July 2011
- Final manuscript due: 1 September 2011
- Tentative publication: First Half 2012

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